Microwave Technology for Superfund Site Remediation

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Advantages of Microwave Activated Carbon Regeneration

Eliminates greenhouse gas production from catalytic oxidizers

Recovers petroleum based solvents for recycling

Cost-effective means to replace currently operating catalytic oxidizers

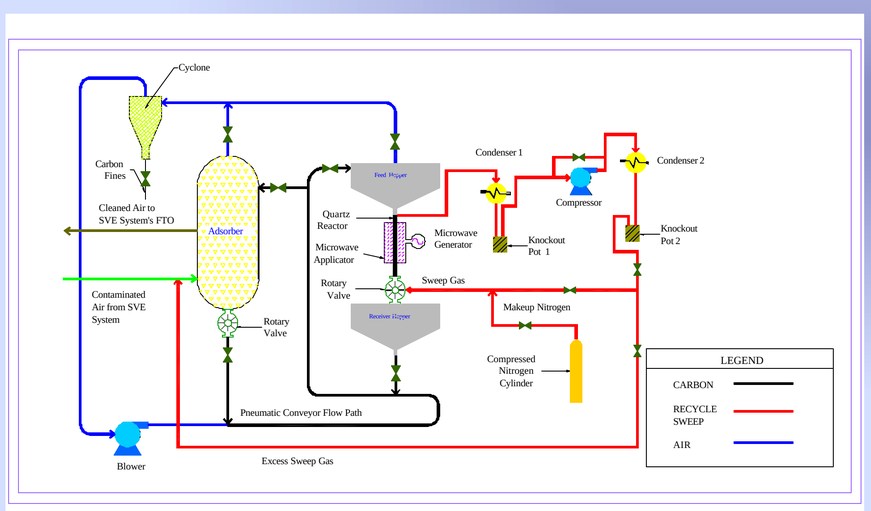
PHASE I

NIEHS SBIR Phase I Program

Design and Construct a 12 kg/hr microwave activated carbon regenerator.

Operate the prototype microwave unit at McClellan IC 34/35/37 FTO site for two months to regenerate carbon and recover contaminants on-site

Demonstrate that microwave technology is a cost-effective solution for the treatment of soil vapors



Phase I Unit Process Flow Diagram

Phase I Unit at McClellan

PHASE II

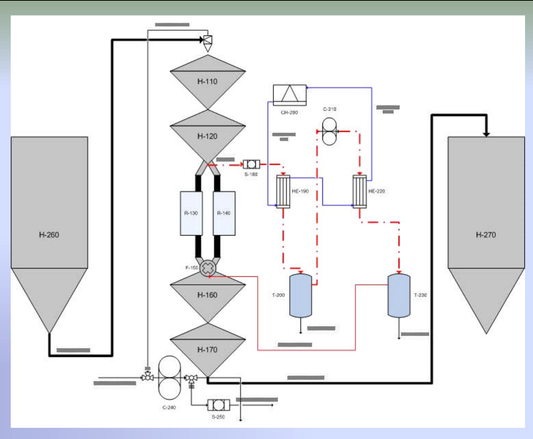
NIH SBIR Phase II Program

Design and Construct a 100-lb/hr Mobile Microwave Unit

Field Demonstration of Mobile Microwave Unit

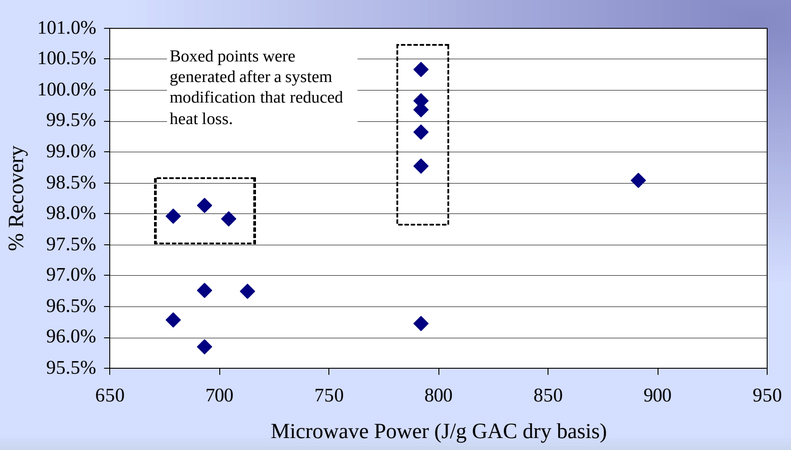
- Chlorinated Solvent Contaminated Site
- Fuel Contaminated Site (Fuel depot or gas station)
- Dry Cleaning Facility

Characterize and Purify Recovered Solvents and Fuels



Phase II Unit Process Flow Diagram

Scale Up Regenerator Performance



Phase II Unit During Testing

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NIEHS National Institute of Environmental Health Sciences

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